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The Alberta Heritage Foundation for Medical Research

Research Matters



October 1997



Our Mission

We support a community of researchers who generate knowledge that improves the health and quality of life of Albertans and people throughout the world. Our long term commitment is to fund basic, patient and health research based on international standards of excellence and carried out by new and established investigators and researchers in training.

AHFMR administers the Health Research Fund for Alberta Health. Projects supported include mental health research, health services research and population health studies.

The Lionel McLeod Scholarship in Health Research is awarded annually by AHFMR for academic excellence to university students studying in Alberta and British Columbia. Donations to the fund are matched by AHFMR.

The SEARCH program is a collaboration of AHFMR, Alberta Health, the Provincial Mental Health Advisory Board, and the 17 Regional Health Authorities, with the valuable contributions of the University of Alberta and the University of Calgary.

For more information please call or write to:

**The Alberta Heritage Foundation
for Medical Research (AHFMR)**

3125 Manulife Place

10180 - 101 Street

Edmonton, Alberta T5J 3S4

Tel. (403) 423-5727

Fax. (403) 429-3509

e-mail: postmaster@ahfmr.ab.ca

website: <http://www.ahfmr.ab.ca>

Research

If any of us were granted one wish, chances are most of us would choose good health.

Good health isn't possible through wishing however. It takes using the best knowledge offered by science and medicine to pursue healthy lifestyles and recover rapidly from illness. And it takes passing that knowledge on to our children. For society as a whole, funding and support of medical and health research is crucial, to advance knowledge and to keep building towards better health.

Seventeen years ago, the Alberta government used \$300 million from oil revenues to begin building a medical research community that would be attracted and assisted by the Alberta Heritage Foundation for Medical Research (AHFMR). Little more than a decade later, the province of Alberta was ranked by an international review committee as one of the top medical research centres in North America. Much of the credit for that ranking was attributed to the presence of AHFMR.

Today, the Foundation's support of excellent biomedical research is resulting in wishes fulfilled. Consider a small sampling of AHFMR researchers' triumphs: genes discovered for diabetes, cancer, and rare childhood diseases; devices invented to help paralyzed people move and walk; therapies to help diabetics produce their own insulin; and drugs created to fight hamburger disease, manage Hepatitis B, and

Matters

stop pain without causing ulcers. Besides developing a first class research community, AHFMR support has built some of the finest laboratories, facilities, and training programs available to teach new generations the best of science.

The Foundation's vision and partnerships with government, universities, and funding agencies are resulting in health research support including a unique, province-wide training program for health personnel, AHFMR's administration of research funds for Alberta

Health, an in-house unit to assess health technologies, a new program to disseminate research findings, and new research awards focusing on population health.

AHFMR support over the years totals more than half a billion dollars. Rough estimates show that outside funding contributions have doubled or even tripled the AHFMR

investment, a sum that packs a major wallop in terms of economic impact in Alberta. In health, research, science and the economy, the Heritage investment is yielding benefits for Albertans and for the world.

On behalf of the Board of Trustees and the staff at AHFMR, it is our pleasure to introduce to you, on the following pages, just a few of the nearly 400 researchers and scientists-in-training funded by AHFMR. You'll also meet other Albertans who are being helped by the advances of medical and health research. For these people, for all Albertans, and for generations to come, research matters.



(left) Mr. Alvin Libin, Dr. Matthew Spence

Matthew W. Spence, M.D., Ph.D.
President and CEO

Alvin G. Libin
Chairman

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David Kitchen, B.A.
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Margaret L. Mrazek, R.N., B.Sc.N.,
M.H.S.A., L.L.B., Edmonton

Beverley Ann MacLeod
Calgary

Nellie A. Radomsky, Ph.D., M.D.
Red Deer

Terrence White, Ph.D.
President, The University of Calgary

For information about
SEARCH projects and
future training programs,
please call Sharon
Kalinka at (403) 423-5727.

For details of **SEARCH**
projects, please check
the following website:
<http://search.ahfmr.ab.ca>



Little Elizabeth, shown in her mom Barbara's arms, was born in May. It was a difficult birth, but both mom and daughter were discharged from hospital 36 hours later. Barbara experienced complications in the week following Elizabeth's birth that required medical

attention. Since then, both have been fine.

Barbara's experience is common to many people throughout North America, where early maternity discharge is becoming the norm. The practice is not without debate however, with re-admissions such as Barbara's cited as reason enough to extend hospital stays. For Alberta's 17 health regions, early maternity discharge is just one of many health issues that must be researched in order to fund appropriately, according to community need. And up until recently, the necessary research expertise wasn't available outside the universities.

With last year's debut of a unique Heritage-funded program called Swift Efficient Application of Research in Community Health (SEARCH), the

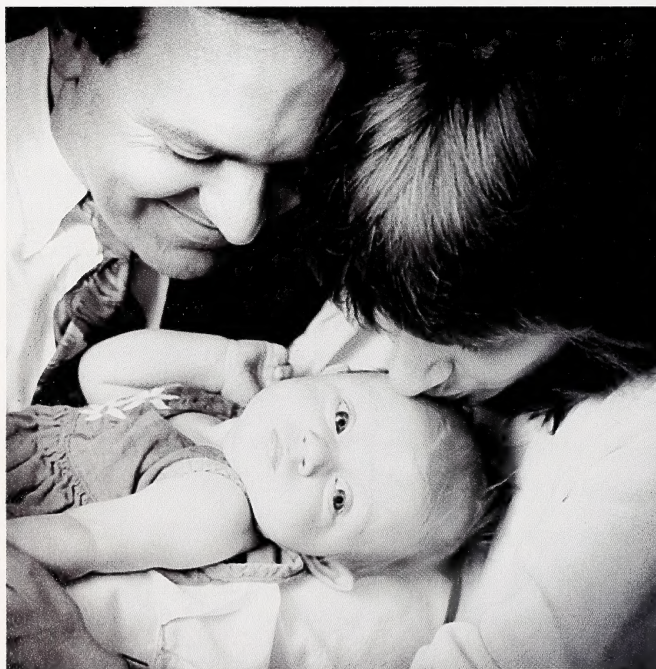
regions are starting to get the local community health research expertise they need. SEARCH participants selected from across Alberta went through intensive training last year and are now working on individual and province-wide group projects, based on priority health issues in the regions.

The group pictured above with Elizabeth and her parents is studying the impact of

early maternity discharge. The information they glean from their research will help provide evidence and information to make local decisions.

Little Elizabeth

(left) Erik Ellehoj, Elizabeth Ellehoj, Barbara Redmond



● **Dr. Karl Riabowol** and colleague Dr. Igor Garkavtsev discovered a gene that blocks the growth of several types of cancer.

● **Dr. Sam Weiss** made headlines five years ago by proving that brain cells can grow again. Just last year he discovered spinal cord stem cells, the parents of new nerve cells. This means that the dream of walking again could someday be a reality for many paralyzed people.

● **Dr. Ron Zernicke** heads a team of researchers who have put the University of Calgary's McCaig Centre at the front and centre of joint injury research. Most recently, Dr. Zernicke, together with U of A colleague Dr. Peter Allen, received a \$1.3 million grant from the U.S. based Whitaker Foundation, the first time Canadians have received this type of grant funding. The grant was awarded for a collaborative graduate program offered by the U of C and U of A in the hot new field of biomedical engineering, the field that develops new engineering technologies to promote health.

● **Dr. John Wallace** developed a revolutionary type of painkiller and anti-inflammatory that works like Aspirin®, but doesn't cause stomach ulcers.



(left) Dr. Karl Riabowol, Dr. Sam Weiss, Dr. Ron Zernicke, Dr. John Wallace

Pieces of a puzzle

Gains in medical research usually happen in small steps, like fitting pieces into a vast and very complex puzzle. Sometimes years of research lead to a discovery or breakthrough that makes the world take notice. Alberta boasts some of the top medical researchers in North America, scientists who make headlines nationally and internationally with their contributions to the human health puzzle.

For more information
please call the Heart and
Stroke Foundation of Alberta
and NWT at (403) 451-4545 or
check their website at:
<http://www.hsfacal.org/>

All non-insulin-dependent and
insulin-dependent patients
aged 35 and older are
included among those adults
at high risk for heart problems
according to Alberta Medical
Association Guidelines.

For more information
call (403) 482-2626
or check their website at:
[http://www.amda.ab.ca/
general/clinical-practice-
guidelines/catalogue/
documents/cardiovascular-
patient-info.html](http://www.amda.ab.ca/general/clinical-practice-guidelines/catalogue/documents/cardiovascular-patient-info.html)

Right atrium

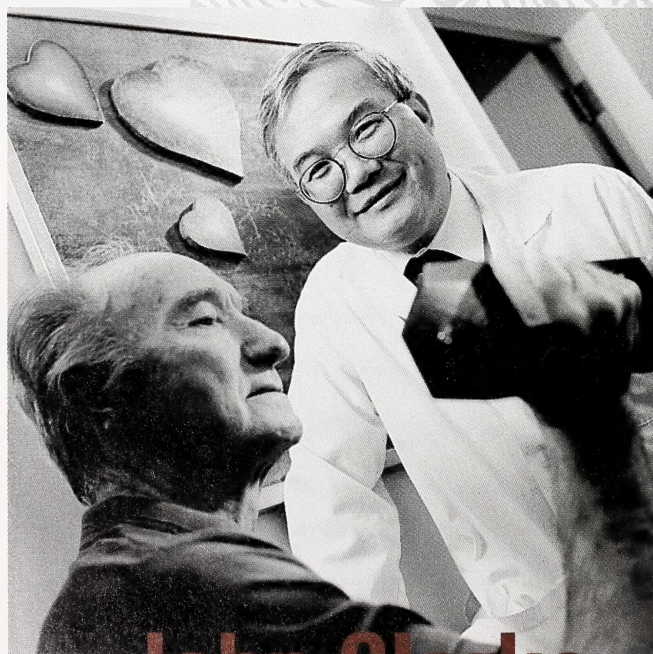
Last spring John Clarke was under the weather—feeling sluggish, with swelling in his ankles and feet, and some difficulty in drawing deep breaths, especially at night. ¶

The 73-year old Mr. Clarke, who had had a heart attack nearly 20 years ago, was diagnosed by his U of A cardiologist, Dr. Koon Teo, with congestive heart failure, a serious condition that can occur after a history of heart problems.

These days, Mr. Clarke is breathing easier. His weight and blood pressure are down,

and the fluid retention that characterizes congestive heart failure has diminished. He's feeling stronger physically, thanks to a program developed by Dr. Teo, and is much more confident about life.

Heritage researcher Dr. Teo is comparing how effective certain drugs combined with mild exercise is in managing congestive heart failure in selected patients. Twice a week Mr. Clarke follows a medically supervised exercise program involving weights, stationary bicycle and treadmill at the University of Alberta Hospital Exercise Testing Laboratory. If Dr. Teo's results show that the program works, it might become a standard approach in managing congestive heart failure.

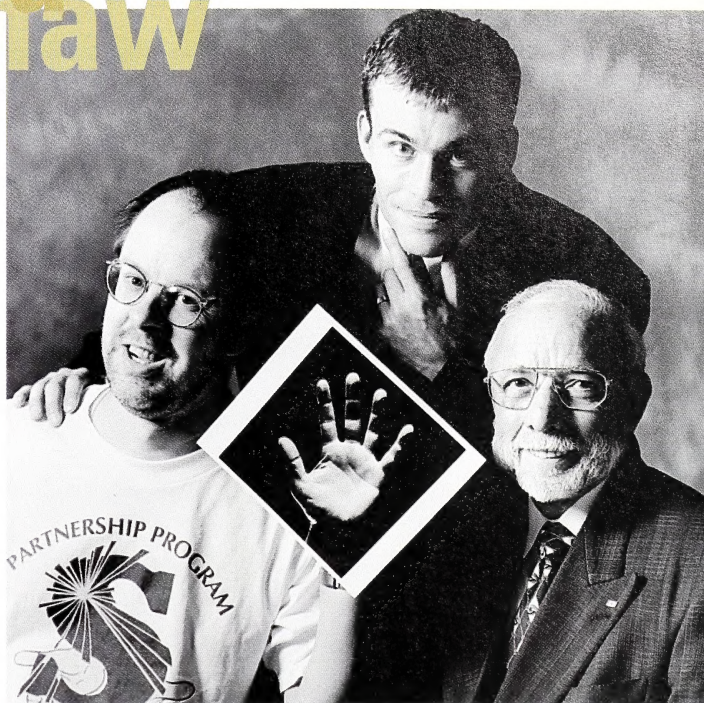


(left) Mr. John Clarke, Dr. Koon Teo

John Clarke is breathing easier

David Burkinshaw

David Burkinshaw was a first-year photography student at NAIT when he had his first psychotic episode, hearing voices and hallucinating. He was diagnosed



in 1989 as suffering from paranoid schizophrenia, one of the most serious of mental illnesses.



For general information about mental health please call:

in Edmonton:

Canadian Mental Health Association (Alberta North Central Region)
(403) 414-6300
Provincial Mental Health Advisory Board: Edmonton
(403) 422-2233;
Area Director, Northern Alberta (403) 472-5588

in Calgary:

Schizophrenia Society of Alberta (403) 262-4554 or toll free in Alberta: 1-800-661-4644
Provincial Mental Health Advisory Board, Area Director, Central Alberta (403) 783-7742
Area Director, Southern Alberta (403) 297-4520
Canadian Mental Health Association
(403) 297-1700

David is helped enormously by anti-psychotic drugs that he takes daily and by his determination to live his life, not his illness. Although he cannot work full-time, he volunteers for several charitable organizations, including the Schizophrenia Society of Alberta.

U of C professor and psychiatrist Dr. Julio Arboleda-Florez conducts innovative research that could help improve the lives of the mentally ill. Funding from the Heritage-administrated Health Research Fund helps him study the connection between the number of ridges on each hand and a genetic susceptibility to schizophrenia. If this proves to be a useful indication for the disease, his research might lead to early identification and intervention, which would lessen the long term damage of schizophrenia.

Schizophrenia occurs in about one out of every 100 people. Depression is a much more common form of mental illness that can also have a profound impact on patients and their families. David Dozois, a Heritage-supported Ph.D. student at the U of C and the 1996 Lionel McLeod Scholar, studies how people with clinical depression think differently than non-depressed people. Mr. Dozois' research is trying to uncover how negative thinking develops in depression and how it may be altered with treatment.





Programs and Financial* Highlights 1996-97

*For a complete set of audited consolidated
financial statements,
please call (403) 423-5727

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Trustees

Alvin G. Libin, Chairman
Calgary

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Coronation

Murray Fraser, B.A., L.L.B., LL.M.
President, The University of Calgary
(until July 31, 1996)

Roderick Fraser, Ph.D.
President, The University of Alberta

Paul V. Greenwood, M.B., Ch.B.
M.R.C.P., F.R.C.P.(C), Edmonton

David Kitchen, B.A.
(as of April 23, 1996) Calgary

Margaret Mrazek, B.Sc.N.,
M.H.S.A., L.L.B., Edmonton

Beverley Ann MacLeod
Calgary

Nellie A. Radomsky, Ph.D., M.D.
Red Deer

Donald R. Seaman, B.Sc.
(until April 23, 1996) Calgary

Terrence White, Ph.D.
President, The University of Calgary
(as of July 31, 1996)

How does the AHFMR decide who to fund?

All final decisions about people and projects supported by AHFMR are made by the Trustees, who weigh the mandate to support a balanced program of research that meets standards of excellence against available income, considering that a portion of it must be added to the endowment to conserve purchasing power for the future.

Who advises the Trustees?

The AHFMR Board of Trustees and executive rely on advice from people in the international, national, and provincial medical research and health communities. Members of the AHFMR Scientific Advisory Council advise on major applications and policy decisions related to research. Other scientists and stakeholders in research, education and health serve on AHFMR committees or as consultants. The Foundation has nine standing review committees.

How are applications for funding evaluated?

AHFMR follows the established procedure of evaluating applications by a peer review system. This means applications are judged and rated by other researchers who have expert knowledge in the field of the applicant and related areas. Applications are assessed by external reviewers who may be working in any part of the world, and by internal AHFMR committees with representatives from Alberta and other North American universities. The committees then forward their recommendations to the Trustees.

How do successful candidates receive their funding?

Researchers are recruited by the university, hospital or other organization where the researcher will conduct his or her research. Applications for funding are then submitted to AHFMR through the host organization. The investigator is therefore an employee of the host organization and not of AHFMR. AHFMR provides its support through the host organization.

Award Programs of the Foundation

Heritage Medical Scientists

Heritage Medical Scientists are internationally recognized for their contributions to science. This award encourages the recruitment and establishment of senior medical scientists who provide leadership in Alberta's scientific community. This award is for five years and is renewable.

Heritage Senior Medical Scholars

This award assures the continued recruitment and establishment of exceptional investigators in areas relevant to medical and health research. Candidates must hold an M.D., D.D.S., D.V.M., Ph.D. or the equivalent and have an established record of excellence in independent research over several years as a faculty member. The candidate must also show an interest in training Alberta's future research scientists. This five year award is nonrenewable, although at the end of their term, awardees may apply for a Scientist award.

Heritage Medical Scholars

Heritage Medical Scholars are investigators who have recently completed their postdoctoral research training and demonstrate the ability to initiate and conduct independent as well as collaborative research. Heritage Medical Scholars exhibit a desire and ability in training future research scientists. This nonrenewable five year award ensures the continuing growth of Alberta's scientific community. At the end of their term, awardees can apply for a Senior Scholar award.

Heritage Clinical Investigators

Clinical Investigatorships allow clinically qualified investigators, holding an M.D. or D.D.S. and full-time appointments in a sponsoring institution to further their independent experience with the aid of a mentor. Clinical investigators must have completed two to three years of supervised medical research training. This three-year award is renewable and may be extended for another three years. This award plays an important role in linking basic research to patient-based research and patient care.

Heritage Population Health Investigators

The Heritage Population Health Investigator encourages the recruitment to and establishment in Alberta of well trained investigators in the fields of population health research, quantitative and population sciences, health services research, and social and behavioural sciences. Applicants who have recently completed post M.D. or Ph.D. research training, but who have not yet established an independent research record are eligible for this three year renewable award. This award provides investigators with the opportunity to further their research experience with the aid of a mentor.

Independent Establishment Grants for New Investigators

Independent Establishment Grants may be awarded to new investigators who are not requesting salary support by the Foundation. The grant aids new investigators to establish their research in Alberta, by providing equipment, material and technical assistance during their initial two to three years in the province.

Fellowships

Heritage Medical Research Fellowships provide qualified candidates interested in pursuing a career in medical or health related research, with full-time and part-time postdoctoral training in research in any area of health sciences relevant to the aims of the Foundation. Candidates must be sponsored by a faculty supervisor and must demonstrate high academic standing and research ability.

Heritage Clinical Fellowships

The Heritage Clinical Fellowship Program provides individuals who hold an M.D. or D.D.S. degree and have completed or are near completion of subspecialty, clinical training with the opportunity to pursue a career in health related or clinical research in Alberta. Applicants must be sponsored by a faculty member who has a record of productive research and agrees to act as the Clinical Fellow's supervisor. Applicants are required to undertake a minimum of two years of full-time research.

Health Research Career Renewal Award

The Heritage Health Research Career Renewal Award provides an opportunity for established Alberta faculty members, demonstrating interest in clinical or health research, to acquire rigorous training in epidemiology, biostatistics, psychosocial sciences or clinical experimental methods and design. Upon entrance into such a program of study, the investigators are part of a chain reaction that leads to the increased development of clinical and health research activities and the design of patient-based or population-oriented research in Alberta. This award is renewable.

Studentships

The Foundation provides full-time, part-time and summer Studentships in the area of medical and health research. Full-time and part-time Studentships are available for students who are working towards professional health related degrees and who are interested in pursuing a career in medical or health related research. Summer Studentships provide the opportunity for students with exceptional academic records to participate directly in medical or health related research in Alberta. This program encourages students to consider formal training and a career in health research.

Dr. Lionel E. McLeod Health Research Scholarship

The scholarship was established in the memory of Dr. Lionel McLeod, who was head of Endocrinology at the University of Alberta, Dean of Medicine at the University of Calgary, founding President of the Alberta Heritage Foundation for Medical Research from 1981-1989, and former President and CEO of the University Hospital, Vancouver, BC. The award is given each year to an outstanding student at the Universities of Alberta, Calgary or British Columbia for full-time research that is relevant to human health.

Grants for Major Equipment

Major Scientific Equipment grants allow the investigators and the institutions to purchase the necessary equipment that is essential to maintaining a competitive level of high quality research.

Institutional Support Programs

Institutional Support programs aid Alberta's research community in accessing the most up-to-date information and technical developments in medical and health related research. Programs such as the Visiting Lecturer and Travel Funds, Heritage Visiting Professorships, Heritage Visiting Scientists, Infrastructure Grants, Conferences and Workshops and Local Workshops, Retreats or Planning Sessions provide important information and resources necessary to the continuing development and conduct of modern health research in Alberta.

Technology Commercialization (TC) Program

The Technology Commercialization program funds the commercialization of medically related innovations so that new technology can aid in improving healthcare. The program promotes research/industry collaboration. Technology Commercialization provides funding in three phases for commercially promising projects that do not fall under the mandate of traditional medical research funding agencies and are not developed adequately to attract outside investors.

Health Research Fund

The Health Research Fund (HRF) is a new entity formed by the administrative integration of the Health Services Research and Innovation Fund (HSRIF) and the Mental Health Research Fund (MHRF), both initially established by Alberta Health. Since November 1995, these funds have been administered by the Foundation (AHFMR). The creation of this combined Fund is a direct result of a broad consultation which has taken place with many individual Albertans and Alberta organizations with an interest in health research. It is intended to provide opportunities for relevant, high quality health research across the entire spectrum of research areas, including mental health research, health services research, population health research and health technology assessment research. This research is essential to sustain the goals of the Health Research Agenda developed by the AHFMR through the broad consultation and deliberation of its Health Research Advisory Committee.

AHFMR Applications Advisory Committees Membership 1996 - 1997

* Denotes New Committee Members
July, 1997

Scientific Advisory Council

Dr. John Bell
John Radcliffe Hospital
Headington, Oxford, UK

Professor John Evans
Western General Hospital
Edinburgh, SCOTLAND

Dr. Abraham Fuks
McGill Cancer Centre
Montreal, QC

Dr. Jennifer Lund
Institute of Ophthalmology
London, UK

Dr. Barry McBride
University of British Columbia
Vancouver, B.C.

Dr. Jonathan Meakins
Royal Victoria Hospital
Montreal, QC

Dr. Edward Perrin
University of Washington
Seattle, WA

Dr. I. Barry Pless
Montreal Children's Hospital
Montreal, QC

Dr. Daniel Porte Jr.
University of Washington
Seattle, WA

Dr. Anita Roberts*
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Bethesda, MD

Dr. Gary Stiles
Duke University Medical Centre
Durham, NC

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Mt. Sinai Hospital
Toronto, ON

Professor Trevor Sheldon
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York, UK

Professor Leif Svanstrom
Karolinska Institutet
Sundbyberg, SWEDEN

Dr. Peter Tugwell
Ottawa General Hospital
Ottawa, ON

Alberta Health Collaboration Committee

(New Committee to replace PACHR
& Mental Health Advisory Committee)

Dr. Doug Wilson - Chair
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Dr. Julio Arboleda-Florez
Calgary General Hospital

Dr. Glen Beck
University of Saskatchewan

Dr. Sharon Campbell
Alberta Cancer Board

Dr. Bonnie Kaplan
Alberta Children's Hospital

Dr. Thomas Maguire
The University of Alberta

Dr. John McDonald
The University of Calgary

Dr. Steve Newman
The University of Alberta

Dr. John Remmers
The University of Calgary

Dr. Donald Spady
The University of Alberta

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McGill University

Dr. Harold W. Cook
Dalhousie University

Dr. Lindsay Nicolle
University of Manitoba

Dr. Bryan S. Richardson
The University of Western Ontario

Dr. Ori Rotstein
Toronto General Hospital

Dr. Duncan Stewart*
St. Michael's Hospital, Toronto

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The University of Alberta

Dr. Keith L. MacCannell
The University of Calgary

Dr. SFP (Paul) Man*
The University of Alberta

Dr. Warren Veale
The University of Calgary

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University of Calgary

Dr. John F. Elliott
The University of Alberta

Dr. Charles Holmes*
The University of Alberta

Dr. Bryan Kolb
The University of Lethbridge

Dr. L. Brent Mitchell
Foothills Hospital, Calgary

Dr. Hanne Ostergaard*
The University of Alberta

Dr. David Severson*
University of Calgary

Dr. Koon Teo*
The University of Alberta

Dr. Larry Weiler
University of British Columbia

Dr. Leonard I. Wiebe
University of Alberta

Major Equipment Committee

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The University of Alberta

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The University of Calgary

Dr. Norm Dovichi
The University of Alberta

Dr. Michael J. Ellison*
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Alberta Children's Hospital

Dr. Marek Michalak
The University of Alberta

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The University of Calgary

Dr. Don Woods
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University of Toronto

Dr. Garth Bray*
McGill University

Dr. Pat Choy
University of Manitoba

Dr. Judah Denburg*
McMaster University

Dr. George A. Mackie
University of British Columbia

Dr. Kenneth C. Marshall
University of Ottawa

Dr. Grant Pierce*
University of Manitoba

Dr. Keith Tanswell*
Hospital for Sick Children, Toronto

Senior Scholar Committee

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University of Toronto

Dr. James Lund*
University of Montreal

Dr. Ross MacGillivray*
University of British Columbia

Dr. Barry Posner
McGill University

Dr. Clifford Stanners*
McGill University

Dr. Hung-Sia Teh
University of British Columbia

Studentship Committee

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The University of Calgary

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The University of Alberta

Dr. William Cole*
The University of Calgary

Dr. Tessa Gordon
The University of Alberta

Dr. Margaret J. Harrison*
The University of Alberta

Dr. Ole Hindsgaul*
The University of Alberta

Dr. Paul Kubes
The University of Calgary

Dr. Scott Patten*
The University of Calgary

Dr. Karl T. Riabowol
The University of Calgary

Dr. Bruce Stevenson*
The University of Alberta

AHFMR Advisory Committee Membership 1996-1997

Health Research Advisory Committee

Dr. Lyall Black
East Central Regional Health
Authority #7
Lethbridge, AB

Dr. Heather Bryant
Alberta Cancer Board
Calgary, AB

Dr. Ursula Dawe
Alberta Association of Registered
Nurses
Calgary, AB

Dr. Paul Hasselback
Chinook Health Region
Lethbridge, AB

Mr. Nelson Kennedy
Northern Alberta Institute of
Technology
Edmonton, AB

Ms. Cecilie Lord
Research & Strategic Issues
Alberta Health
Edmonton, AB

Dr. J.A. MacKay
Palliser Health Authority
Medicine Hat, AB

Dr. Luis Martin
Biomira Inc.
Edmonton, AB

Mr. Gerald Northam
Mistahia Health Region
Grande Prairie, AB

Ms. Mary Oordt
Lethbridge, AB

Ms. Sheila Payne
Society for the Retired
and Semi-Retired
Edmonton, AB

Dr. Donald Philippon
Health Services Development
University of Alberta
Edmonton, AB

Dr. Martha Piper
Vice President
(Research External Affairs)
University of Alberta
Edmonton, AB

Mr. Ken Scott
Calgary Regional Health Authority
Calgary, AB

Ms. Sheila Sommer
Banff National Park Health Unit
Banff, AB

Dr. Lloyd Sutherland
Community Health Sciences
University of Calgary
Calgary, AB

Dr. Allan Tupper
Associate Vice President
(Government Relations)
University of Alberta
Edmonton, AB

Ms. Penny Wilson
Provincial Health Advisory Board
Calgary, AB

Dr. Doug Wilson
Public Health Sciences
University of Alberta
Edmonton, AB

Program Advisory Committee

Dr. Paul Armstrong
University of Alberta

Dr. Dylan Edwards
University of Calgary

Dr. Thomas Feasby
University of Calgary

Dr. Marvin Fritzler
University of Calgary

Dr. John Farrell
Calgary Regional Health Authority

Dr. David Olson
University of Alberta

Dr. Richard Peter
University of Alberta

Dr. Joel Weiner
University of Alberta

Awards Received by AHFMR Personnel

Chris Bleackley
Medical Research Council of Canada
Distinguished Scientist
Howard Hughes Medical Institute
International Investigator

Michele Crites Battié
Volvo Award in Clinical Sciences
awarded by the International Society
for the Study of the Lumbar Spine

Leigh Field
Diabetes Interdisciplinary Research
Program Award between Medical
Research Council of Canada & Juvenile
Diabetes Foundation International

Cyril Frank
1997 London Life Award in Medical
Research

Robert French
Medical Research Council of Canada
Distinguished Scientist
Medical Research Council of Canada
Group Grant

William Ghali
1996 Petro-Canada Young Innovator
Award

Wayne Giles
Medical Research Council of Canada
Group Grant

Reuben Harris
Governor General's Gold Medal for his
PhD thesis (previously Lionel McLeod
Scholarship winner)

Alan F. Kingstone
Young Psychologist Award,
International Congress of Psychology

Paul Kubes
Medical Research Council of Canada
Group Grant

Jonathan Lytton
Medical Research Council of Canada
Group Grant

Liam Martin
1996 Faculty of Medicine Distinguished
Achievement Award, University of
Calgary

Jon Meddings
Searle Gastrointestinal Research Unit
Establishment Grant

Marek Michalak
Medical Research Council of Canada
Senior Scientist

Nori Nakamura
Award from the London Life Insurance
Company

Barry Phipps
Recipient of the Molson Young
Investigator Award

Randy Read
Howard Hughes Medical Institute
International Investigator

Susan Rosenberg
1996 Young Scientist Award of the
Genetics Society of Canada

Paul Schnetkamp
1996 Faculty of Medicine Distinguished
Achievement Award, University of
Calgary
Medical Research Council of Canada
Group Grant

Brent Scott
1996 Faculty of Medicine Distinguished
Achievement Award, University of
Calgary

Gaynor Spencer
1996 Killam Postdoctoral Fellowship

Lloyd Sutherland
Searle Gastrointestinal Research Unit
Establishment Grant

Mark Swain
1996 Faculty of Medicine Distinguished
Achievement Award, University of
Calgary

Tapio Videman
Volvo Award in Clinical Sciences
awarded by the International Society
for the Study of the Lumbar Spine

John Wallace
Searle Gastrointestinal Research Unit
Establishment Grant

Ron Zernicke
Whitaker Special Opportunity Award

New AHFMR Personnel as of March 31, 1997

SCIENTISTS

Bleackley Robert C., Ph.D.
Department of Biochemistry, Faculty of
Medicine & Oral Health Sciences
University of Alberta, *Pathways To Cell
Mediated Cytotoxicity*

Prochazka Arthur, Ph.D.
Department of Physiology Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *Sensory Control
Of Movement*

Schnetkamp Paul P., Ph.D.
Department of Medical Biochemistry
Faculty of Medicine, University of
Calgary, *Structure And Function Of The
Retinal Rod Na-Ca+K Exchanger And
Guanylyl Cyclase*

Taylor Diane E., Ph.D.
Department of Medical Microbiology &
Immunology Faculty of Medicine & Oral
Health Sciences, University of Alberta,
*"Genetic Studies Of Bacterial
Plasmids,"Campylobacter And
Helicobacter*

Vance Dennis E., Ph.D.
Department of Biochemistry Faculty of
Medicine & Oral Health Sciences,
University of Alberta,
*Phosphatidylcholine Metabolism And
Function*

Vogel Hans J., Ph.D.
Department of Biological Sciences
Faculty of Science, University of
Calgary, *NMR Studies Of Regulatory
And Metal Ion Binding Proteins*

SENIOR SCHOLARS

Holmes, Charles F., Ph.D.
Department of Biochemistry Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *Regulation Of
Protein Phosphatases -1 And -2A By
Natural Product Toxins And Reversible
Phosphorylation*

Kubes, Paul, Ph.D.
Department of Medical Physiology
Faculty of Medicine, University of
Calgary, *Polymorphonuclear Leukocyte-
Endothelial Cell Interactions: The Role
Of Nitric Oxide*

Moqbel, Redwan, Ph.D.
Department of Medicine Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *Biology Of
Eosinophil-Derived Cytokines And Their
Contribution To Immune And
Inflammatory Reactions*

Olson, David M., Ph.D.
Department of Obstetrics &
Gynaecology Faculty of Medicine & Oral
Health Sciences, University of Alberta,
Eicosanoids In Perinatology

Ostergaard, Hanne L., Ph.D.
Department of Medical Microbiology &
Immunology Faculty of Medicine & Oral
Health Sciences, University of Alberta,
*Contribution Of Accessory Molecules To
Lymphocyte Activation*

Riabowol, Karl T., Ph.D.
Department of Medical & Biochemistry
Faculty of Medicine, University of
Calgary, *Regulation Of Growth In
Transformed And Senescing Cells
Function Of Bacterial Receptors For
Transferrin & Lactoferrin*

Scott, R. Brent, M.D.
Department of Paediatrics Faculty of
Medicine, University of Calgary,
*Intestinal Anaphylaxis -
Pathophysiologic Mechanisms*

Sharkey, Keith A., Ph.D.
Department of Medical Physiology
Faculty of Medicine, University of
Calgary, *The Effects Of Inflammation On
The Enteric Nervous System*

Turner, Raymond W., Ph.D.
Department of Anatomy Faculty of
Medicine University of Calgary
*Soma-Dendritic Interactions In
Oscillatory Discharge*

Warnock, Garth L., M.D.
Department of Surgery Faculty of
Medicine & Oral Health Sciences
University of Alberta *Optimization Of
The Survival Of Transplanted Human
Pancreatic Islets Of Langerhans*

Young, Dallan B., Ph.D.
Department of Medical Biochemistry
Faculty of Medicine, University of
Calgary, *Investigation Of Mammalian
CAP And CAP2*

Zernicke, Ronald F., Ph.D.
Department of Surgery Faculty of
Medicine, University of Calgary,
*Bone Adaptation And Musculoskeletal
Dynamics*

SCHOLARS

Bennett, David J., Ph.D.
Department of Rehabilitation Faculty of
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*Recovery Of Motoneuron Function After
CNS Injury*

Berthiaume, Luc, Ph.D.
Department of Cell Biology & Anatomy
Faculty of Medicine and Oral Health
Sciences, University of Alberta,
*Dynamic Protein Palmitoylation In
Cellular Signaling And Targeting*

Casey, Joseph R., Ph.D.
Department of Physiology
Faculty of Medicine and Oral Health
Sciences, University of Alberta,
*Mechanism And Interactions Of Anion
Exchange Proteins*

Davidge, Sandra T., Ph.D.
Department of Obstetrics &
Gynaecology Faculty of Medicine and
Oral Health Sciences, University of
Alberta, *Sex Steroids And Vascular
Function*

Kavanagh, Katherine M., M.D.
Department of Medicine Faculty of
Medicine and Oral Health Sciences,
University of Alberta, *The Importance
Of Alterations In The Passive Properties
Of Myocardial Conduction*

Kingstone, Alan F., Ph.D.
Department of Psychology
Faculty of Science, University of
Alberta, *Brain Mechanisms Of Overt
And Covert Orienting*

Kumar, Rakesh, Ph.D.
Department of Medical Microbiology &
Immunology Faculty of Medicine and
Oral Health Sciences, University of
Alberta, *Design And Evaluation Of
Novel Antiviral Agents For Human
Immunodeficiency Virus And Herpes
Virus Infections*

Robbins, Stephen M., Ph.D.
Department of Oncology Faculty of
Medicine, University of Calgary, *The
Role Of The SRC Family Protein-
Tyrosine "Kinase, HCK In
Hematopoietic Cells"*

Teo, Koon K., M.D./Ph.D.
Department of Medicine Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *Clinical Trials And
Health Outcomes Research In
Cardiovascular Disease
Messengers*

Woodman, Richard C., M.D.
Department of Medicine Faculty of
Medicine, University of Calgary, *Human
Neutrophil Leukosialin (CD43):
Characterization And Functional
Significance Of Shedding*

CLINICAL INVESTIGATORS

Mew, Daphne J., M.D./Ph.D.
Department of Surgery Faculty of
Medicine, University of Calgary, *Gene
Therapy In Mesothelioma*

Moore, Ronald B., M.D./Ph.D.
Department of Surgery Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *Preclinical PDT
Studies With Second Generation
Photosensitizers*

Murray, Allan G., M.D.
Department of Medicine Faculty of
Medicine & Oral Health Sciences,
University of Alberta, *The Function Of
CD95 (fasR or APO-1) Expressed On
Vascular Endothelial Cells*

Swain, Mark G., M.D.
Department of Medicine Faculty of
Medicine, University of Calgary,
*Cytokine-Neuroendocrine Interactions In
Cholestatic Liver Injury: Neuroendocrine
Regulation Of Inflammation*

Winston, Brent W., M.D.
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Medicine, University of Calgary, *TNF α
Signal Transduction And Its Role In The
Induction Of IGF-1 Gene Transduction*

POPULATION HEALTH INVESTIGATORS

Caulfield, Timothy A., LL.M.
Department of Health Law Institute
Faculty of Law, University of Alberta,
*Legal Issues In The Allocation And
Utilization Of Genetic Services: A
Model For The Analysis Of Health Care
Policies And Reform*

Ghali, William A. M.D.
Department of Medicine Faculty of
Medicine University of Calgary
*Evaluation Of Hospital Mortality And
Complication Rates After Coronary
Artery Bypass Surgery In Western
Canada*

Meadows, Lynn M. Ph.D.
Department of Family Medicine Faculty
of Medicine University of Calgary *The
Perceived Health And Health-Related
Experiences Of Midlife Women*

Patten, Scott B., M.D./Ph.D.
Department of Community Health
Faculty of Medicine, University of
Calgary, *An Evaluation Of The Impact
Of Selection Bias On Case-Control
Studies Of Major Depression Using
Clinical Subjects*

Suarez-Almazor, Maria E., M.D./Ph.D.
Department of Public Health Sciences
Faculty of Medicine & Oral Health
Sciences, University of Alberta,
*Mortality, Morbidity And Long-Term
Institutionalization After HIP Fracture*

HEALTH SENIOR SCHOLARS

Videman, Keijo T.
Department of Physical Therapy Faculty
of Rehabilitation Medicine, University
of Alberta, *Determinants Of Spinal
Degenerative Findings A Methodologic
And Epidemiologic Investigation With
Twins Using MPI & DEXA*

Summary of Applications Received & Processed - 1996/1997 Award Year

Number of applications processed

	University of Alberta				University of Calgary				Others			
	T	A	R	O	T	A	R	O	T	A	R	O
Biomedical												
Clinical Fellowship	7	4	3	0	9	5	3	1	1	1	0	0
Clinical Investigator/Establishment Grant*	5	4	1	0	2	2	0	0	0	0	0	0
Conference Grants	8	8	0	0	8	8	0	0	0	0	0	0
Fellowship	63	12	47	4	51	14	34	3	13	2	11	0
Independent Establishment Grants	2	2	0	0	1	0	1	0	0	0	0	0
Major Equipment	23	12	11	0	24	13	11	0	1	1	0	0
Part-time Fellowship	3	2	1	0	1	1	0	0	0	0	0	0
Scholarship/Establishment Grant	10	5	5	0	7	6	1	0	1	0	1	0
Scientist/Establishment Grant	6	3	3	0	11	6	5	0	0	0	0	0
Senior Scholars/Establishment Grant	7	5	2	0	5	4	1	0	0	0	0	0
Special Initiative	2	2	0	0	2	2	0	0	1	1	0	0
Studentship	79	22	55	2	65	19	45	1	0	0	0	0
Summer Students	202	97	96	9	125	86	37	2	9	6	3	0
Visiting Professor	3	3	0	0	1	1	0	0	0	0	0	0
Visiting Scientist to/from Alberta	6	3	3	0	6	5	1	0	0	0	0	0
	426	184	227	15	318	172	139	7	26	11	15	0

Health Research

Health Conference	0	0	0	0	0	0	0	0	1	1	0	0
Health Fellowship/Clinical Fellowship	1	1	0	0	2	0	2	0	1	0	1	0
Health Part-time Studentship	1	1	0	0	0	0	0	0	0	0	0	0
Health Research Career Renewal	1	1	0	0	2	2	0	0	2	0	2	0
Health Senior Scholar	1	0	1	0	0	0	0	0	0	0	0	0
Health Special Initiative	2	2	0	0	2	2	0	0	3	3	0	0
Health Studentship	15	3	12	0	6	0	6	0	5	1	4	0
Health Summer Students	18	10	8	0	0	0	0	0	0	0	0	0
Health Visiting Professor	1	0	1	0	0	0	0	0	0	0	0	0
Health Visiting Scientist to Alberta	1	1	0	0	0	0	0	0	0	0	0	0
Population Health Investigator	4	1	3	0	1	1	0	0	0	0	0	0
	45	20	25	0	13	5	8	0	12	5	7	0

Health Research Collaboration

Health Research Fund**	19	13	6	0	19	9	10	0	13	8	5	0
Mental Health Studentship	3	2	1	0	6	5	1	0	1	1	0	0
Special Initiative	1	1	0	0	0	0	0	0	0	0	0	0
	23	16	7	0	25	14	11	0	14	9	5	0

*includes renewals

T=total A=approved R=rejected O=withdrawn/pending

Total Awards Active on March 31, 1997

Award Category	U of A	U of C	Others	Totals
Clinical Fellowships	5	3	8	16
Clinical Investigatorships/Establishment	6	12	-	18
Full-Time Fellowships	30	27	10	67
Full-Time Studentships	93	52	3	148
Health Research Career Renewal	1	2	-	3
Health Research Fund	12	15	3	30
Health Senior Scholar	1	-	-	1
Mental Health Studentships	8	6	1	15
Part-Time Fellowships	1	2	-	3
Part-Time Studentships	2	1	-	3
Population Health Investigatorships	2	3	-	5
Scholarship/Establishment	31	16	-	47
Scientist/Establishment	12	20	-	32
Senior Scholarship/Establishment	20	21	-	41
	224	180	25	429

Program Expenditures for 1996/1997

Award Category

Biomedical

Clinical Fellowship	500,236
Clinical Investigator/Establishment Grant	2,280,099
Conference Grants	77,251
Fellowships	2,320,270
Independent Establishment Grants	1,259,329
Institutional Grants	833,286
Major Equipment	1,874,524
Scholarship/Establishment Grant	5,476,445
Scientist/Establishment Grant	3,961,301
Senior Scholars/Establishment Grant	3,422,185
Special Initiative Funding	213,733
Studentship	2,051,217
Summer Students	911,340
Technology Commercialization 1 & 2	573,788
Visiting Researchers	84,938
Total	\$25,839,942

Health Research

Health Clinical Fellowship	196,626
Health Conference	2,100
Health Fellowship	60,470
Health Part-time Studentship	2,885
Health Research Career Renewal	63,000
Health Senior Scholar	513,822
Health Special Initiative Funding	288,397
Health Studentship	136,021
Health Summer Students	31,200
Population Health Investigator	456,842
Total	\$1,751,362

Health Research Collaboration

Health Services Research and Innovation Fund	639,501
Mental Health Research Fund	748,016
Special Initiative	30,000
Total	\$1,417,517

Where Does AHFMR Get Its Funding?

An overview of our endowment

In November 1979 an Act of Legislation created the Alberta Heritage Foundation for Medical Research to establish and support a balanced, long-term program of medical research based in Alberta. Foundation activities are directed toward the discovery of new knowledge and the application of that new knowledge to improve health care of Albertans and all people. The Foundation stands at arm's length from the government under the management of a group of distinguished Trustees. The Foundation is supported by an endowment fund which generates interest revenue for operating expenses.

What is our endowment?

The Alberta Heritage Foundation for Medical Research Endowment Fund was established in 1980 to finance the objectives of the Foundation - to establish a long term program of medical and health research in the Province. The Fund operates under the authority of the Alberta Heritage Foundation for Medical Research Act. The initial investment was \$300 million.

How is it managed?

The investment policy was developed over a number of years by Alberta Treasury in co-operation with AHFMR Board. The investment policy takes into account the expected conditions in the capital markets, the need for prudent investments, and a sustainable longer term spending program by the Foundation. The investment strategy under this policy is managed by the Investment Management Division of Alberta Treasury. The fund contains a diversified holding of Canadian investments along with equity investments in a number of international markets.

How do we decide how much we need to support our programs each year?

AHFMR executives develop long range projections, based on Trustee decisions about maintaining current programs and developing new ones. These projections reflect the cost and number of investigators for each program, related costs and the anticipated value of the endowment. Annual budgets are then developed from this long range projection.

Why do actual expenditures sometimes vary from the budget?

Budgets are based on estimates of quality and number of applications for programs and the results of the review process. Actual expenditures may vary from the budget, depending on the quality and number of applications received and approved. (Excellence is the primary criteria for funding proposals.) In addition, the Foundation responds to needs as they arise in the community and unforeseen opportunities may result in increased spending.

How do we determine how much to transfer from the endowment to cover our budget?

Foundation management works with Treasury in developing long term investment forecasts and strategies to ensure sufficient cash to fund current operations, while maintaining the value of the endowment by providing sufficient reinvestment of income to ensure future commitments can be met. To provide this balance between current needs and long term goals, the Trustees have developed guidelines as to the maximum amounts that may be transferred each year. These guidelines recognize that annual income to the endowment could vary drastically, depending on the performance of financial markets in which investments are made.

What is the investment strategy for the endowment?

Due to these relatively high cash requirements to fund annual expenditures, the portfolio is structured to generate a high level of current income with a high degree of certainty. The current portfolio provides for the spending requirements plus growth to cover inflation, with a reasonable margin of safety.

In order to generate this income, Treasury has developed a target asset mix for investments in short term, fixed income and equities. These investments are managed approximately 80% directly by Treasury and 20% by international and U.S. managers.

How is Fund performance evaluated?

The Investment Management Division Strategy Committee of Alberta Treasury regularly reviews and benchmarks asset classes, and monitors the performance of fund managers. Treasury meets regularly with Foundation management, and reports fund performance to AHFMR Trustees.

Financial Summary*

Financial Position

March 31, 1997 (thousands of dollars)

ASSETS	1997	1996
Cash	\$2,048	\$1,999
Restricted cash	6,310	7,133
Accounts receivable	13	50
Advances and prepaid expenses	42	205
Capital assets	566	463
Deferred pension costs	11	17
	\$8,990	\$9,867

LIABILITIES AND NET ASSETS	1997	1996
Accounts payable and accrued liabilities	\$1,467	\$827
Accrued retirement allowance	123	99
Deferred lease inducement	77	95
Capital lease obligation	199	-
Deferred contributions	8,943	9,118
	10,809	10,139
Net assets invested in capital assets	367	463
Unrestricted net assets	(2,186)	(735)
	\$8,990	\$9,867

Revenues and Expenses

For The Year Ended March 31, 1997 (thousands of dollars)

REVENUES	OPERATIONS	MIP**	HRC***	TOTAL	1996
Transfers from endowment	\$28,000	\$ -	\$ -	\$28,000	\$26,000
Amortization of deferred contributions	-	1,150	2,053	3,203	649
Other	506	-	-	506	237
	28,506	1,150	2,053	31,709	26,886
EXPENSES					
Grants and Awards	27,591	966	1,418	29,975	25,118
Program Operations	908	79	126	1,113	875
Administration	1,554	105	509	2,168	1,740
	30,053	1,150	2,053	33,256	27,733
Deficiency of revenues over expenses for the year	\$(1,547)	\$ -	\$ -	\$(1,547)	\$(847)

* Excerpt from the 1996-97 audited Consolidated Financial Statements

** Medical Innovation Program

*** Health Research Collaboration

The audited consolidated financial statements of the Foundation provide a more comprehensive accounting of the financial position and results of the Foundation's operations.

A complete set of audited consolidated financial statements is available on request to the AHFMR at (403) 423-5727.

Alberta Heritage Foundation for Medical Research

3125 ManuLife Place 10180 - 101 Street Edmonton, Alberta T5J 3S4 TEL: (403) 423-5727 FAX: (403) 429-3509

Both Dr. Taylor and Dr. Read are witnesses to the dangers of antibiotic resistant bacteria. Both think there are steps we can all take to reduce risk.

● **Antibiotics must be** prescribed prudently. For example, no matter how miserable you feel, viruses cannot be knocked out by antibiotics.

● **Antibiotics must be** taken as directed by your doctor and pharmacist. It is unwise to share your antibiotics with others or use other peoples' prescriptions, as antibiotics prescribed for others may not be effective against your infection, and may promote bacterial resistance.

● **Improving sanitary** conditions kills bacteria. In other words, wash your hands, often!



"Absolute cleanliness is the true disinfectant"

Florence Nightingale 1820 - 1910

Wash Your Hands

Frightening examples of antibiotic resistance—killer pneumonias, stronger variations of tuberculosis and other age-old diseases—are in headlines everywhere. The sophisticated arsenals of science are on the defensive. Yet, washing our hands thoroughly to kill bacteria is one of the most basic steps in the fight against antibiotic resistance. Basic medical research is helping us understand how resistance occurs—by bacteria mutating or swapping genetic material—and how we can use this understanding to develop new drugs. Heritage researchers Dr. Diane Taylor and Dr. Ron Read have put Alberta on the map for their work in the field of antibiotic resistant bacteria. In her U of A lab, Dr. Taylor has identified a key protein that bacteria use to shield themselves from such antibiotics as tetracycline. If she can learn how this protein works, once-powerful drugs like tetracycline might be reengineered for new potency. Dr. Read's work at the U of C focuses on how to disguise antibiotics as food for bacteria. If successful, bacteria will be destroyed as they accept lethal "care packages."

(left) Dr. Ron Read, Dr. Diane Taylor

For information about the
Aboriginal Diabetic Wellness
Program,
please call (403) 477-4512
The Canadian Diabetes
Association website:
<http://www.diabetes.ca/>

Juvenile Diabetes Foundation
Canada
(905) 889-4171
website:
<http://www.jdfcure.com/>
Alberta JDF chapter
phone numbers:
Calgary (403) 255-7100
Edmonton (403) 428-0343



Kelsey Beelby

Five years ago, about the time Kelsey Beelby was born, Dr. Leigh Field decided to bet on a long shot. A Heritage researcher at the U of C, Dr. Field embarked on a search for the genetic cause of juvenile diabetes, an investigation so complex that colleagues thought it almost impossible. By last year, when Kelsey was diagnosed with juvenile diabetes, Dr. Field's gamble had paid off. She had found not one, but three genes for the disease, with the latest one, discovered in 1996, proving to be the most powerful of the three.

For Kelsey Beelby and her family, juvenile diabetes, also known as Type I diabetes, is a gamble for life. But they're upping their ante with careful

management of diet and exercise, monitoring of blood sugar, and administering of insulin—all done in a calm, positive manner to keep Kelsey healthy and happy.

The threat of complications is always in the shadows for diabetics. Blindness, kidney failure, and blood vessel and nerve damage that can lead to amputations, are just some of the long term results that can occur. Basic research by scientists like Dr. Field is the best bet for a diabetes-free life for the Kelseys of tomorrow.



(left) Dr. Leigh Field, Kelsey Beelby

Melanie Omeniho's family *has been decimated by adult-onset diabetes. Several relatives have had limbs amputated because of complications of the disease, and others died in diabetic comas. Four years ago, Melanie was also diagnosed with diabetes. But her prospects for health are good, thanks to an innovative program at Edmonton's Royal Alexandra Hospital.*



(left) Melanie Omeniho, Dr. Don Voaklander

Developed by native Elders and hospital medical staff, the Aboriginal Diabetes Wellness Program uses western medicine along with native traditions to teach life-saving information. Features such as diabetic diets incorporating wild game and bannock are attracting people from all over Northern Alberta to participate in the program and learn long term diabetes management.

Long term diabetes management is crucial for reduced

complications, improved health, and savings in health budgets. Dr. Don Voaklander, an epidemiologist with the Department of Public Health Sciences at the U of A, is comparing standard diabetes information programs which generally have very low attendance by Aboriginal peoples, with the Aboriginal Diabetic Wellness Program. His research is supported by the Health Research Fund, administered by AHFMR on behalf of Alberta Health.

Joyce looks like her mother

Everyone says Joyce looks like her mother, but she has her father's eyes. What Joyce didn't inherit from her parents was a rare genetic disorder called Prader-Willi Syndrome. Marked by uncontrollable eating, obesity and certain developmental problems, Prader-Willi Syndrome is thought to occur spontaneously before or around the time of

conception.

Heritage researcher Dr. Rachel Wevrick, a recent arrival to the U of A's new Department of Medical Genetics, is trying to find the gene (or genes) in a chunk of missing genetic material that causes Prader-Willi Syndrome. She is trying to identify which of the missing genes interfere with the part of the brain that signals when we're hungry and when we're full. She is also investigating whether other genes on the same chromosome may be important in the development of the brain or influence obesity in general.

Researchers like Dr. Wevrick offer hope for healthier lives in the future.



(left) Joyce Okura, Dr. Rachel Wevrick, (below) Tim Caulfield

For more information about
Prader-Willi Syndrome check the
following website:
[http://www.athenet.net/~pwsa_](http://www.athenet.net/~pwsa_usa/index.html)
[usa/index.html](http://www.athenet.net/~pwsa_usa/index.html)

Prader Willi Syndrome
Association of Alberta

tel: (403) 274-7486 (Calgary)
tel: (403) 467-3529 (Edmonton)

For more information about
genetics and ethics, please
check the following website:
Health Law Institute, Faculty of
Law, University of Alberta:
[http://www.law.ualberta.ca/](http://www.law.ualberta.ca/centres/hli/)
[centres/hli/](http://www.law.ualberta.ca/centres/hli/)

But other uses for genetics are being hotly debated.
Should genetic material be patented, or commercialized?




Should genetic information be made available to employers, insurance companies, banks? What are the rights of people who donate genetic material for research?

Tim Caulfield wrestles with these questions daily. He uses his expertise as a legal scholar to help decide the right thing to do with genetic material. Mr. Caulfield's research at the U of A's Health Law Institute (Faculty of Law) in the area of ethics and genetics has won him recognition nationally and a Heritage Population Investigator Award.

(left) Dr. Tapio Videman, Terry Chiluba, Dr. Michele Crites Battie

For information about
managing back pain,
please call:

North American Chronic
Pain Association of Canada
toll free at:
1-800-616-(PAIN) 7246, or
check their website at:
[http://www3.sympatico.ca/
nacpac/nacpac03.htm](http://www3.sympatico.ca/nacpac/nacpac03.htm)



There have been times in his life during which Terry Chiluba could hardly stand up straight. Terry started suffering back pain in his teens, just like his father. And now Terry's son, in his early twenties, is experiencing the same type of pain. Terry and his family are typical of millions of Canadians from every cultural background and walk of life who suffer the frustrations, and worse, of back pain caused by disc degeneration. Paradoxically, back pain is on the rise even though there are more therapies and treatments available today than ever before. For Dr. Tapio Videman and Dr. Michele Crites Battie, that paradox was a clue that disc degeneration may be caused by something other than such long-suspected culprits as certain sports, smoking, vibration, and heavy occupational demands. Nonetheless, the two scientists were surprised when their study of identical twins in Finland yielded evidence that genetics combined with childhood influences, more than all other suspected factors, are to blame for disc degeneration. Their discovery made world headlines. Dr. Videman and Dr. Crites Battie were recruited to the University of Alberta with Heritage funding and they are continuing their research on sets of non-identical twins.

Just like his father

A rosier future

U of A medical physicist Dr. Stuart Jackson's ability to see blue means a rosier future for the safety of blood supplies.

Because blood sometimes contains material that can harm patients with weak immune systems,

it is standard practice to irradiate the donor blood. Dr. Jackson invented the "RadTag", a tag that changes to blue when it has gone through radiation, a permanent indication that the blood is safe to use.

Dr. Jackson is one of dozens of innovators who have received support from AHFMR's Technology Commercialization (TC) Program. TC has helped commercialize innovations to treat a number of medical conditions, from *E-coli* poisoning to sleep apnea. TC-supported technologies are Alberta-made and patented, many of them originating from Heritage-funded basic research.

Other technologies come from people who see a solution to a need.

Former nurse Carol White's work with the elderly led her to develop, and manufacture through her Red Deer company, the K-Special Back. This inexpensive wheelchair device lets people with

spinal curvatures sit comfortably for long periods of time.

But how do we know we've got the best tools for health care?

AHFMR's Health Technology Assessment (HTA) Unit takes up this challenge daily. Formerly with Alberta Health, AHFMR's HTA Unit assesses health technologies by reviewing existing global evidence on them. Recent HTA reports include assessments of a liver cancer therapy, *in vitro* fertilization as a treatment for infertility, and a brain operation to alleviate the symptoms of Parkinson's Disease.

Application of the best available knowledge about health technologies contributes to an effective and efficient health care system.

AHFMR's new Dissemination Program is


developing ways to bring the research community together with policy makers and healthcare providers so that decisions in health care are evidence-based.

RadTag™

BLUE DOT INDICATES IRRADIATION

Target Dose ☐ 15 Gy ☐ 25 Gy Other _____ Gy

Date _____ / _____ / _____ Operator _____


Distributed by:  MDS Nordion

RadTag™

BLUE DOT INDICATES IRRADIATION

Target Dose ☐ 15 Gy ☐ 25 Gy Other _____ Gy

Date _____ / _____ / _____ Operator _____

Distributed by:  MDS Nordion



(left) Mrs. Phyllis Mooney, Carol White



Did you know?

Alberta is one of the top research centres in North America? That's largely because of the Alberta Heritage Foundation for Medical Research.

The *AHFMR Newsletter* highlights the pioneering work of Alberta scientists and researchers, and includes valuable sources and practical information on health and medicine. Recent issues included stories on:

heart disease
chronic back pain
mental illness
childhood injury
how cells work

The *AHFMR Newsletter* is a helpful teaching tool with illustrations, photographs, and even a cartoon or two, to explain medical and health research and innovations developed in our province. Because research matters to all of us.

AHFMR also produces two additional newsletters, *TC News*, for innovators in the medical field, and the *Health Technology Assessment News* for health professionals.

For more information about
AHFMR's Technology
Commercialization (TC)
Program, please call
Cheryl Sawchuk at
(403) 423-5727.

For information about
AHFMR's Health
Technology Assessment
Unit, please call Francisca
Swist at (403) 423-5727 or
e-mail fswist@ahfmr.ab.ca.

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AHFMR's Dissemination
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or e-mail:
postmaster@ahfmr.ab.ca.

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Thanks

Thanks to the featured researchers, and the following models and extras who made the photographs possible:

Wanda Tennant, *Alberta Health, Edmonton*
Vickie Boechler, *Westview Regional Health Authority*
Robin Brown, *East Central Health Region*
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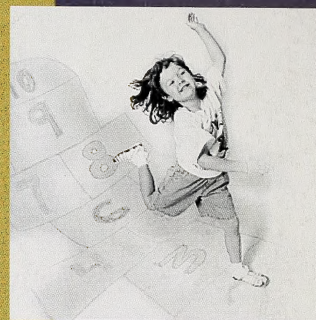
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MEDICAL RESEARCH



writer/editor: Kathleen Thurber, AHFMR

design: Bunnell/Freadrich, Edmonton

photography: Trudie Lee, Calgary

printing: Quebecor Printing, Edmonton